MUAMMOLAR

1-muammo:

Xavfsizlik tizimlari odatda standartlashtirilmagan va aqlli integratsiya mavjud emas. Bundan tashqari, ularni boshqarish uchun juda ko‘p ishchi kuchi talab etiladi.

2-muammo:

Eskirgan texnologiyalardan foydalaniladi. Wi-Fi va simli tarmoqlar orqali ma’lumot uzatish tezligi past, kechikish esa juda yuqori.

3-muammo:

Zamonaviy sun’iy intellekt texnologiyalaridan foydalanish orqali xavfsizlikka tahdid soluvchi muammolarni hal qilish zarur.

YECHIMLAR

1-yechim:

Butun kampus xavfsizlik tizimini yagona **integratsiyalashgan 5G asosidagi platforma**da qurish.

- Barcha xavfsizlik komponentlari (CCTV, kirish nazorati, signal tizimi va boshqalar) bitta markaziy tizim orqali boshqariladi va kuzatiladi.
- Barcha tizimlardan real vaqt rejimidagi ma’lumotlar va ogohlantirishlar bir joyda to‘planadi, bu esa tahdidlarni tezda aniqlash va ularga javob berish imkonini beradi.
- Joyda ishlaydigan ishchi kuchi sonini kamaytirish imkonini beradi.

2-yechim:

Tezligi **10 Gbps** gacha bo‘lgan va kechikishi **1 millisekunddan** kam bo‘lgan **to‘liq 5G tizimidan foydalanish.**

- 10 Gbps tezlikda yirik fayllarni yuklab olish va yuklash, 4K/8K videolarni uzatish va bulutli xizmatlardan foydalanish deyarli bir zumda amalga oshadi.
- 1 ms dan kam kechikish juda tez va ishonchli javob vaqtini ta’minlaydi.
- Yuqori o‘tkazuvchanlik va past kechikish ko‘plab IoT qurilmalarining samarali va xavfsiz aloqa qilishiga imkon beradi.

3-yechim:

Kuzatuv va monitoring tizimlariga **sun’iy intellekt (AI)** texnologiyalarini joriy etish.

- AI g‘ayrioddiy yoki shubhali harakatlarni aniqlay oladi, bu jinoyat yoki baxtsiz hodisalarning oldini olishga yordam beradi.
- AI tizimlari inson aralashuvisiz xavfsizlik buzilishi yoki favqulodda holatlar haqida darhol xabar yuborishi mumkin.

- AI tizimlari ma’lumotlarni tahlil qilib, xavfsizlik bo‘yicha oldindan bashoratli qarorlar chiqarish imkonini beradi.

Nima uchun biz 5G dan foydalanamiz

Bu kampus xavfsizlik texnologiyalarining deyarli barchasi kampus tarmog‘iga ulangan bo‘lib, kuchli, ishonchli ulanish zarurligini ta’kidlaydi. 5G tarmoqlari taklif qilishi mumkin bo‘lgan yuqori o‘tkazuvchanlik va past kechikish ta’limning kelajagida muhim rol o‘ynashi kerak. Chunki Verizon’ning 5G Ultra Wideband ma’lumotlarni 4G’dan sezilarli darajada tezroq ko‘chirish potentsialiga ega, u IoT qurilmalari, jumladan, kampus xavfsizligi va xavfsizligini yaxshilashi mumkin bo‘lgan yuqori aniqlikdagi kuzatuv texnologiyasi uchun ishonchli va xavfsiz ulanishni ta’minlashga yordam beradi. Kampus qancha ko‘p IoT qurilmalaridan foydalansa, u kiberxavfsizlik tahdidlariga shunchalik sezgir bo‘lishi mumkin. 5G qurilma asosida o‘zaro autentifikatsiya qilinganligi sababli, u xavfsizroq WPA2 yoki WPA3 protokollari asosida autentifikatsiya qiluvchi Wi-Fi’dan ko‘ra tabiiyroq xavfsizroqdir.

Assalom alaykum, hello everyone. Today, we can show some problems and their solutions in a smart campus, school, etc

PROBLEMS

Currently, many businesses and educational institutions are facing serious security issues. A promising solution to these problems is the use of 5G-based devices.

You know 5G is really faster than 4G or 3G. It can share much information in a very short time.

1-Problem

Security systems are generally not standardized, and there are no smart integrations. There is an excess of workforce

So what does that mean? We saw that there are a lot of security employees, guards in companies, universities, and factories. That’s why these companies have to pay a lot of salary to their employees.

2-Problem

It uses outdated technologies; the data transmission speed over WiFi and wired networks is low, and the delay is very high

Nowadays, every company or university has more than more information, students, and employees. That's why these companies' network quality should be fast, modern, and safe.

3-Problem
To address problems that pose threats to security by using modern artificial intelligence technologies.

You know, artificial intelligence technologies are really powerful assistants in our lives.

So we saw some problems in these themes. And I'm gonna give you a solution to these problems
SOLUTIONS
1-solution - The campus' complete security system should be built on a single integrated system

- All security components (CCTV (Closed-Circuit Television), access control, alarms, etc.) can be monitored and managed from one central platform
- Real-time data and alerts from all systems in one place help identify and respond to threats faster.
- Provide a small workforce in the place

2-solution - Using a full 5G system with speeds of 10 Gbps and low latency of less than 1 ms

- With speeds up to 10 Gbps, downloading and uploading large files, streaming 4K/8K videos, and accessing cloud services become almost instantaneous
- Latency below 1 millisecond means extremely fast response times.
- Low latency and high bandwidth allow many loT devices to communicate efficiently and reliably

You know we have used 4G technologies and equipment till now. But we need to start to use 5G in our companies. Because 5G can help us with low-latency and high-bandwidth problem-solving

3-solution - The application of artificial intelligence technologies in surveillance systems

- Al can detect unusual or suspicious behavior, helping to prevent crimes or accidents before they happen

- AI systems can send instant notifications about security preaches or emergencies without human intervention
- AI systems can send instant notifications about security breaches or emergencies without human intervention

Nearly all of these campus security technologies are connected to the campus network, emphasizing the need for a strong, reliable connection. The high bandwidth and low latency that 5G networks can offer should have a significant role to play in the future of education. For example, 5G Ultra Wideband has the potential to move data substantially faster than 4G; it could help ensure a reliable, secure connection for IoT devices, including high-definition surveillance technology that could improve campus safety and security. The more IoT devices a campus uses, the more susceptible it can be to cybersecurity threats. Because 5G mutually authenticates based on the device, it's inherently more secure than Wi-Fi, which authenticates based on less secure protocols, WPA2 or WPA3.

So, if you work with a lot of users, you have to find solutions to delays and other network problems. So that’s my point, and our next speaker is Akbar Abdusattorov.